

## **REMARKS/ARGUMENTS**

### **In the Claims:**

Claims 17-26 are in this application.

Claims 1-16 have been canceled.

Claims 17-19 are currently amended.

### **Claim Rejections**

#### **§ 102 Rejections**

Claims 17-24 and 26 were rejected under 35 U.S.C. 102(b) as being anticipated by Mori et al. (US 5,821,627) (hereinafter "Mori"). (Office Action at Page 2).

Independent claim 17 is currently amended. Claim 17 recites at least "applying a laser beam to the first material disposed on the second material". Contrary to the Examiner's statement that all elements of claim 17 are disclosed in Mori, applying a laser beam to a first material **disposed on a second material** to diffuse a portion of the first material into a portion of the second material is not disclosed; the rejection is unsupported by the art and should be withdrawn. Mori fails to disclose applying a laser beam to a first material when that material is disposed on a layer of second material to diffuse a portion of the first material into the second material, as recited in the claim. Mori's disclosure of heating two metals that are in contact to diffuse the metals does not use "a laser beam." (Mori, col. 10 lines 7-11). Mori's disclosure of heating a metal using an infrared ray occurs when the metals that are to be diffused are not in contact (Mori, col. 16 lines 21-30). Therefore, claim 17 is not anticipated by Mori.

Claims 18-24 and 26 depend from claim 17. Based at least in part on their dependencies, claims 18-24 and 26 are also not anticipated by Mori.

Claims 17-19, 21, 23, and 25 were rejected under 35 U.S.C. 102(b) as being anticipated by Mayer et al. (US 5,246,108) (hereinafter "Mayer"). (Office Action at Page 3).

Claim 17 is currently amended. Independent claim 17 now recites "the laser beam penetrates beyond the first material and into the second material." Mayer discloses a laser beam to heat the surface of a chip. (Mayer at col. 5, lines 11-14). However, Pan does not disclose a laser beam penetrating beyond a first material and into a second material. Therefore, claim 17 is not anticipated by Pan.

Claims 18-19, 21, 23, and 25 depend from claim 1. Based at least in part on their dependencies, claims 2-3 and 27-30 are also not anticipated by Mayer.

### § 103 Rejections

Claim 25 was rejected under 35 U.S.C. 103(a) as being unpatentable over Mori in view of Cole, Jr. et al. (US 5,230,965) (hereinafter "Cole"). (Office Action at page 4).

Claim 25 depends from independent claim 17. As discussed, amended claim 17 is patentable over Mori because Mori fails to teach irradiating two materials while they are in contact. Cole discusses irradiating two materials to cause interdiffusion. (Cole at col. 7, lines 47-49). However, as amended, claim 17 recites "the laser beam penetrates beyond the first material and into the second material." Cole does not teach this limitation. (Cole at col. 7, lines 31-36). Therefore, claim 17 is not rendered obvious by

Mori in view of Cole. Based at least in part on its dependency, claim 25 is also not rendered obvious by Mori in view of Cole.

**Conclusion:**

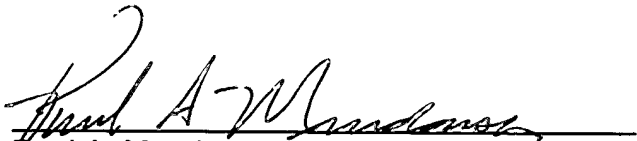
Applicant respectfully submits that claims 17-26 are in condition for allowance. Early issuance of the Notice of Allowance is respectfully requested.

The Commissioner is hereby authorized to charge shortages or credit overpayments to Deposit Account No. 022666. A Fee Transmittal is enclosed in duplicate for fee processing purposes. The Examiner is invited to call Paul A. Mendonsa at (503) 439-8778 if there remains any issue with allowance of this case.

Respectfully submitted,

INTEL CORPORATION

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